



AF/3739

Docket 80099A/SLP  
Customer No. 01333

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of

Girish V. Prabhu, et al

**AN APPARATUS FOR THE  
MANAGEMENT OF  
PHYSIOLOGICAL AND  
PSYCHOLOGICAL STATE OF AN  
INDIVIDUAL USING IMAGES-  
OVERALL SYSTEM**

Serial No. 09/891,773

Filed June 26, 2001

Group Art Unit: 3739

Examiner: Rosiland Stacie Kearney

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*Carol J. Murphy*  
Carol J. Murphy

*August 22, 2005*  
Date

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Commissioner for Patents

P.O. Box 1450

Alexandria, VA. 22313-1450

Sir:

**APPEAL BRIEF TRANSMITTAL**

Enclosed herewith is Appellants' Appeal Brief for the above-identified application.

The Commissioner is hereby authorized to charge the Appeal Brief filing fee to Eastman Kodak Company Deposit Account 05-0225. A duplicate copy of this letter is enclosed.

Respectfully submitted,

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Enclosures

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.



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Sir:

**APPEAL BRIEF PURSUANT TO 37 C.F.R. 41.37 and 35 U.S.C. 134**

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## **APPELLANT'S BRIEF ON APPEAL**

Appellant hereby appeals to the Board of Patent Appeals and Interferences from the Examiner's final rejection of Claims 1-17 which was contained in the Office Action mailed March 23, 2005.

A timely Notice of Appeal was filed on June 22, 2005.

### **Real Party In Interest**

The real party in interest in this US patent application is Eastman Kodak Company of Rochester, New York.

### **Related Appeals And Interferences**

There are currently no appeals or interferences known to Appellant which will directly affect or be directly affected by or have bearing on the Board's decision in the present appeal.

### **Status of the Claims**

This application is a continuation application of US Serial No. 09/430,580, filed October 29, 1999, inventors Prabhu et al., for MANAGEMENT OF PHYSIOLOGICAL AND PSYCHOLOGICAL STATE OF AN INDIVIDUAL USING IMAGES OVERALL SYSTEM, which claims priority from US Serial No. 09/031,245, filed February 26, 1998, inventors Patton et al, now US Patent No. 6,102,846, titled SYSTEM AND METHOD OF MANAGING A PSYCHOLOGICAL STATE OF AN INDIVIDUAL USING IMAGES, which issued August 15, 2000.

Claims 1-17 were originally filed with the continuation application on June 26, 2001.

Claims 1-17 are pending in the application.

Claims 1-17 stand finally rejected under 35 USC 102(e).

Claims 1-17 are the subject of this appeal.

Appendix I provides a clean, double spaced copy of the claims on appeal.

An Office Action rejecting Claims 1-17 was mailed on March 12, 2002. Appellant filed an Amendment in response to the Office Action on June 12, 2002, amending Claims 1, 3, 6, and 12. An Office Action was mailed on September 9, 2002, indicating that the Amendment was not fully responsive. Appellant contacted the Examiner, and learned that Page 4 was not received due to the irradiation process applied to the incoming mail. This matter was resolved by Appellant faxing a complete copy of the Amendment to the Examiner.

A Final Office Action was mailed on December 3, 2002 finally rejecting Claims 1-17. In response to the Final Office Action, Appellant filed a Request for Continued Examiner (RCE) on April 28, 2003 along with an Amendment amending Claims 1, 3, and 12.

An Office Action rejecting Claims 1-17 was mailed on May 21, 2003. Appellant filed an Amendment in response to the Office Action on August 20, 2003, amending Claims 1, 3, and 12.

A Final Office Action was mailed on November 3, 2003 finally rejecting Claims 1-17. In response to the Final Office Action, Appellant filed a Request for Continued Examiner (RCE) on April 22, 2004 along with a response.

An Office Action rejecting Claims 1-17 was mailed on July 28, 2004. Appellant filed a response to the Office Action on December 28, 2004.

A Final Office Action was mailed on March 23, 2005 finally rejecting Claims 1-17. Appellant filed a timely Notice of Appeal on June 22, 2005.

Claims 1-17 stand rejected and are the subject of this appeal. Appendix I provides a clean, double spaced copy of the claims on appeal.

#### **Status Of Amendments After Final Rejection**

A Final Office Action was mailed on March 23, 2005 finally rejecting Claims 1-17. Appellant filed a timely Notice of Appeal on June 22, 2005. Other than the Notice of Appeal and this Appeal Brief, no response has been filed since the Final Office Action of March 23, 2005.

### **Summary of Claimed Subject Matter**

The physical, emotional and mental well-being of an individual can contribute greatly to the quality of life of that individual. Currently, stress results in numerous physical reactions, such as, headache, muscle tension, dizziness or sleeplessness, weight gain, chronic coughing, nervous ticks, stomach upset and shortness of breath. Job stress has been estimated to cost American business \$300,000,000,000 annually. Stress is the response of the body and/or mind to a demand placed upon it.

The present invention proposes to use images reduce stress, more particularly, for the purpose of optimizing one's physiological and psychological state.

As shown in Figure 14, the system of the present invention includes several interrelated components that can be used to help one to manage one's physiological and or psychological state, including a Portable Biosensor Device (102), a Master Set of Images (104)/Therapeutic Image Classification System (106), a Biometric Analyzer (108), a Cognitive Analyzer (110), a Personal Image Profiler (112), a Personal Image Classifier (114), and a Visualization System (116)

Employing the present invention, a master set of images is presented to the user. During presentation of the master set of images, the physiological and cognitive states of the user are measured. Then, based on the combined physiological and cognitive measures, a personal profiler (box 24 of Figure 1) generates the user's personal image profile. Based on the personal image profile and a therapeutic image classification system (box 26 of Figure 1) for images in a therapeutic image data bank (databases) (box 28 of Figure 1), activating and deactivating images are selected from the image data base(s) to create a personal image set (box 30 of Figure 1).

Once a personal image set has been established, the user can start a session. The Biometric Analyzer (box 40 of Figure 2) and the Cognitive Analyzer (box 42 of Figure 2) can be used to determine a user's desired direction/preference for a session (e.g., relaxation, optimal performance, and excitement) (box 44 of Figure 2).

Based on the inputs, the Personal Profiler (box 46 of Figure 2) decides if the current Personal Image set will work or if an updated, Personal Image profile is needed. The Personal Profiler can also receive inputs from a Portable Biosensor Device (box 48 of Figure 2) and from a user's physiological, cognitive and image use history from a secured data base (box 50 of Figure 2).

A visualization device then presents the images to the user according to one's preferences. The duration and/or sequence presentation of the images is performed based on users physiology (box 54 of Figure 2). Input from a "Coach" (box 56 of Figure 2) may also be provided. The "Coach" can monitor physiological responses of the user and provide feedback in the form of visual feedback, verbal reinforcement, verbal suggestions and/or new techniques.

Thus, the present invention provides an apparatus for facilitating management by an individual of a physiological and/or psychological state of the individual using images.

#### **Grounds of Rejection to be Reviewed on Appeal**

Claims 1-17 stand rejected under 35 USC 102(e) as being anticipated by US Patent No. 6,026,322 (*Korenman*).

It is the position of the Examiner that *Korenman* "disclose an apparatus for facilitating management by an individual of a physiological and/or psychological state of the individual comprising a display for a set of images allowing an individual to show the individual chosen by the individual to one's self (col 4 line 62) and a device for allowing the individual to choose images from the set of images (col 4 lines 59-60)". (Final Office Action , dated March 23, 2005, page 2)

#### **Issue on Appeal**

Whether Claims 1-17 are unpatentable under 35 USC 102(e) as being anticipated by US Patent No. 6,026,322 (*Korenman*).

## Arguments

The Examiner alleges that Claims 1-17 are anticipated by US Patent No. 6,026,322 (*Korenman*), believing that *Korenman* discloses “an apparatus for facilitating management by an individual of a physiological and/or psychological state of the individual comprising a display for a set of images allowing an individual to show the individual chosen by the individual to one’s self (col 4 line 62) and a device for allowing the individual to choose images from the set of images (col 4 lines 59-60)”.

### i. Argument for independent Claims 1, 3, and 12

In order for a prior art reference to anticipate, it must disclose each element of a claimed invention, and *Korenman* does not meet this test.

*Korenman* relates to a biofeedback apparatus for use in therapy. More particularly, *Korenman*’s apparatus includes a display visible to the patient

“...and which is characterized in that the display includes visual or pictorial representations of the physiological or psychological condition being treated or the cause of such condition which change in appearance following a change in the parameter sensed in a way corresponding to the physiological or psychological change desired in the patient.” (Col 3, lines 12-22)

As such, *Korenman* is directed to an apparatus wherein the displayed images relate to the condition being treated or the cause of such condition, that is, the displayed images are based on the ailment.

*Korenman* states that this allows the patient to visualize the improvement in their condition “not in his imagination but on a screen” (Col 4, lines 1-4) and further, the patient can see a direct correlation between his internal actions and intentions and the image of the relevant part of the body (as simulated in the graphical display) (Col 4, lines 9-12).

For example, for *Korenman*’s example of irritable bowel syndrome, *Korenman*’s monitor 32 displays “an image of the interior of a bowel 56 which is provided so as to mirror the physiological condition being treated” (*Korenman* Col 10, lines 4-9). The images shown “are based on actual interior



bowel structure as viewed by a camera passing through a bowel. Thus, the animation image is based on the physiological condition being treated” (*Korenman* Col 10, lines 12-15).

In contrast, the apparatus of the present invention facilitates management by an individual of a physiological and/or psychological state of said individual using a set of images/stimuli **chosen by the individual**.

*Korenman*’s images are not chosen by the individual. As stated in *Korenman* at Col 4, lines 61-65, *Korenman*’s user selects a menu option. *Korenman*’s displayed images are pre-determined by the developers of the software and accessed based on the selected menu option. As such, *Korenman*’s displayed images are not chosen by the individual.

Further, the present invention’s set of chosen images are chosen by the individual based on a personalized image profile based on cognitive decisions relating to connectedness, valence and arousal and on biometric analysis. As such, the images are not based on the ailment. This feature is clearly claimed in independent Claims 1, 3, and 12 wherein the images/stimuli are based on a personalized profile and “based on cognitive decisions relating to connectedness, valence and arousal and on biometric analysis”. *Korenman*’s images are not based on cognitive decisions relating to connectedness, valence and arousal and on biometric analysis.

In addition, *Korenman*’s images change in appearance following a change desired in the patient, and the “change in the display occurs substantially concurrently with the change in the psycho-physiological parameter being monitored, i.e. in real time” (*Korenman* Col 10, lines 33-35). For example, for *Korenman*’s example of irritable bowel syndrome, as the user becomes more relaxed, the software generates graphics showing the inflammation being relieved (*Korenman* Col 10, lines 26-29).

In contrast, in the present invention, the images are displayed; the displayed images do not change in appearance. The displayed image are selected so as to “provide a preferred response for said individual”.

Since *Korenman* does not teach or suggest these claimed features of the present invention, the present invention as claimed in independent Claims 1, 3, and 12 is not anticipated by *Korenman*.

ii. Argument for independent Claim 6

With regard to independent Claim 6, *Korenman* does not teach a device for creating a personalized image response profile for the individual and a selector for selecting a set of images from an image library which include characteristics that match the preferred characteristics of the personalized preferred image response profile. Accordingly, Claim 6 is not anticipated by *Korenman*.


iii. Argument for dependent Claims 2, 4-5, 7-11, and 13-17

Claims 2, 4-5, 7-11, and 13-17 are dependent on independent Claims 1, 3, 6, or 12, and therefore include all the features thereof. For the reasons set forth above with regard to Claims 1, 3, 6, and 12, Claims 2, 4-5, 7-11, and 13-17 are believed to be patentable over *Korenman*.

Summary

For at least the foregoing reasons, Appellant's presently claimed invention as set forth in Claims 1-17 is not anticipated under 35 USC 102(e) by *Korenman*. Accordingly, Appellant respectfully requests that the Board of Patent Appeals and Interferences reverse the rejection by the Examiner and mandate the allowance of Claims 1-17.

Respectfully submitted,

  
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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.

## **Appendix I - Claims on Appeal**

1. Apparatus for facilitating management by an individual of a physiological and/or psychological state of said individual using images comprising:

a display for a set of images allowing an individual to show a set of images chosen by the individual to one's self wherein said set of images are based on a personalized image profile based on cognitive decisions relating to connectedness, valence and arousal and on biometric analysis; and

a device for allowing said individual to choose images from said set of images which provide a preferred response for said individual, wherein said chosen images provide common measurable physiological response characteristics which define a personalized image response profile for said individual.

2. The apparatus of claim 1 including apparatus for recording said chosen images and/or said personalized preferred image response profile for said individual.

3. Apparatus for helping an individual manage his/her psychological and/or physiological state, comprising:

a first device for allowing an individual to expose a set of stimuli chosen by the individual to one's self wherein said set of stimuli are based on a personalized stimuli profile based on cognitive decisions relating to connectedness, valence and arousal and on biometric analysis;

a second device for measuring a physiological state of the individual as the individual is exposed to said set of stimuli; and

a third device for recording stimuli from said set of stimuli which provide a preferred response based on the measured physiological state of the individual.

4. The apparatus of claim 3 including a fourth device for creating a personalized preferred response profile that defines preferred characteristics which are representative of common characteristics of the recorded stimuli.

5. The apparatus of claim 3 wherein said second device measure one or more of the following physiological states of an individual, peripheral skin temperature, EMG, EEG, heart rate, heart rate variability, blood pressure, skin conductance response, eye saccades.

6. Apparatus for managing a psychological and physiological state of an individual using images, comprising:

a device for creating a personalized preferred image response profile for an individual by having the individual view a first set of images and choosing images from the first set of images which provide a preferred response for the individual, wherein said personalized preferred image response profile defines preferred characteristics which are representative of common characteristics of the chosen images;

a selector for selecting a second set of images from an image library which include characteristics that match the preferred characteristics of the personalized preferred image response profile; and

a display for displaying the selected second set of images to the individual to manage a psychological and physiological state of the individual.

7. The apparatus of claim 6, including a measurer for measuring a physiological state of the individual, wherein said display for displaying the selected second set of images to the individual includes displaying the selected second set of images in a desired sequence in accordance with the measured physiological state of the individual.

8. The apparatus of claim 6, wherein said device for creating the personalized preferred image response profile includes :

an arranger for arranging the first set of images to show a plurality of images; and

wherein said display shows the plurality of images to the individual to permit the individual to compare the plurality of images;

wherein said chosen images from the first set of images are preferred images for each plurality of images, which provide the preferred response for the individual.

9. The apparatus of claim 6, wherein said measurer measures at least one of an EMG, EEG, galvanic skin response, skin temperature, heart rate,

blood pressure, eye movement or pupil size of the individual as the individual views the images.

10. The apparatus of claim 6, wherein said selector places the selected second set of images on a desired output format.

11. The apparatus of claim 6, including a store for the first and second set of images at a remote location.

12. Apparatus for facilitating management by an individual of a psychological and physiological state of said individual using images, comprising:

a display for allowing an individual to show a first set of images chosen by the individual to one's self wherein said set of images are based on a personalized image profile based on cognitive decisions relating to connectedness, valence and arousal and on biometric analysis;

a first device for measuring a physiological state of the individual as the individual views the first set of images; and

a second device for recording images from said first set of images which provide a preferred response based on the measured physiological state of the individual, and for creating a personalized preferred image response profile that defines preferred characteristics which are representative of common characteristics of the recorded preferred images.

13. The apparatus of claim 12 including a selector selecting a second set of images from an image library which include characteristics that match the preferred characteristics of the personalized preferred image response profile; and

a display for displaying the selected second set of images to the individual to manage the psychological state of the individual.

14. The apparatus of claim 12 including an analyzer for analyzing the individual's own personal images for characteristics that match the preferred characteristics of the personalized preferred image response profile;

selector selecting a second set of images from the individual's own personal images; and

a display for displaying the selected second set of images to the individual to manage the psychological state of the individual.

15. The apparatus of claim 12 wherein said first device measures at least one of an EMG, EEG, galvanic skin response, skin temperature, heart rate, blood pressure, eye movement or pupil size of the individual as the individual views the images.

16. The apparatus of claim 13 wherein said selector places the selected second set of images on a desired output format.

17. The apparatus of claim 13 including a store for storing the first and second set of images at a remote location.



## **Appendix II - Evidence**

NONE

**Appendix III – Related Proceedings**

NONE